



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX LABORATORY
1337 S. 46TH STREET
BLDG. 201
RICHMOND, CA 94804-4698

MAR - 3 2000

MEMORANDUM

SUBJECT: Case R00S16, SDG 00032A
Results for Perchlorate and Total Dissolved Solids Analysis

FROM: *B. Bettencourt*
Brenda Bettencourt, Director
EPA Region 9 Laboratory (PMD-2)

TO: Kevin Mayer, Remedial Project Manager
Northern California Cleanup Section (SFD-7-2)

Attached are the report narrative and results spreadsheet from analysis of samples from the Colorado River Perchlorate Study. These data have been reviewed in accordance with EPA Region 9 Laboratory policy. Summary information for the data included in this report is as follows:

SITE/PROJECT:	Colorado River Perchlorate Study
CASE:	R00S16
LABORATORY:	U. S. EPA Region 9 Laboratory
SAMPLE DELIVERY GROUP(s):	00032A
ANALYSIS:	Perchlorate (R9 Lab SOP 531) Total Dissolved Solids (EPA method 160.1)

A full documentation package for these data, including raw data and sample custody documentation, has been prepared and is filed at the Region 9 Laboratory. Please contact Vance Fong of the Quality Assurance Program (PMD-3) to request review and/or validation of the data.

If you have any questions please contact Rich Bauer at (510) 412-2312, or Ken Hendrix at (510) 412-2321.

ATTACHMENT: Analytical Report

USEPA REGION 9 LABORATORY
REPORT NARRATIVE

CASE NUMBER: R00S16
SAMPLE DELIVERY GROUP: 00032A
PROGRAM: SUPERFUND
DOCUMENT CONTROL #: ESTW-9B-3014
DATE: 02/28/00
ANALYSIS: PERCHLORATE AND TOTAL DISSOLVED SOLIDS
SAMPLE NUMBERS:

SAMPLE ID	LABORATORY SAMPLE ID
09421500	AB26084
09421500	AB26085
09419700	AB26086
09419800	AB26087

GENERAL COMMENTS

Four water samples were received from the Colorado River Perchlorate Study Superfund project on 02/01/00.

The requested analyses were perchlorate by Region 9 Laboratory SOP 531 and total dissolved solids by EPA Method 160.1. No official holding time has been established for analysis of perchlorate in water samples. Sample AB26085 was collected on 11/30/99. Sample AB26084 was collected on 01/12/00. Both samples were analyzed on 02/11/00, which is outside the 28-day holding time internally established at the EPA Region 9 Laboratory. Some studies have shown perchlorate to be stable for much longer than 28 days. All total dissolved solids samples were received outside the 7-day technical holding time. However, if TDS results are being used solely to evaluate potential interferences for the perchlorate analysis it may be more appropriate to use TDS results generated contemporaneous to the perchlorate analysis, rather than within 7 days of the sample collection date.

SAMPLE RECEIPT AND PRESERVATION

All samples were received at a temperature of 8°C on 02/01/00. No custody seals were present.

QA/QC SUMMARY

The following comment appears in the Summary of Analytical Results:

- A. All sample results greater than or equal to ½ the quantitation limit (QL) but less than the QL are estimated (J).

No analytes were detected in the blanks associated with this SDG.

All LFB recoveries were within the QC limits.

No duplicate analysis was performed for TDS due to lack of sample.

The RPD for the perchlorate duplicate was less than the 20% QC limit and the difference between the sample and duplicate was less than 5 times the QL.

All LFM recoveries were within the QC limits.

Questions concerning the data can be answered by Patrick Hirata at (510) 412-2354.

GLOSSARY

Laboratory Reagent Blanks (LRB)

A laboratory reagent blank is laboratory reagent water or baked sand with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. The laboratory reagent blank is used to determine the level of contamination introduced by the laboratory during analysis.

Laboratory Fortified Matrix (LFM) and Laboratory Duplicate (LD) Analysis

The laboratory fortified matrix spike sample and laboratory duplicate analyses provide information about the effect of the sample matrix on sample preparation and measurement. Poor percent recovery (%R) results and large relative percent difference (RPD) between duplicates may indicate inconsistent laboratory technique, sample nonhomogeneity in soils, or matrix effects which may interfere with analysis.

Laboratory Fortified Blank (LFB) Analysis

The laboratory fortified blank is laboratory reagent water or baked sand with a known concentration of the analytes of interest added by the laboratory with all reagents added and carried through the same sample preparation and analytical procedures as the field samples. Poor percent recovery (%R) results may indicate inconsistent laboratory technique.

EPA REGION 9 LABORATORY-RICHMOND, CA
SUMMARY OF ANALYTICAL RESULTS

Case Number: R00S16
Site: Colorado River Perchlorate Study
SDG: 00032A
Date: 02/28/00

Analysis: Perchlorate and TDS
Matrix: Water

Sample No.	09421500			09421500			09419700			09419800			Reagent Blank			Reagent Blank		
Sample I.D.	Hoover Dam			Hoover Dam			Henderson			Boulder City			Blank			Blank		
Lab Sample I.D.	AB26084			AB26085			AB26086			AB26087			N/A			N/A		
Date of Collection	01/12/00			11/30/99			01/19/00			01/20/00			N/A			N/A		
Analyte (units)	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com	Result	Q	Com
Perchlorate (ug/L)	5			4	J	A	180			570			5	U		5	U	
Total Dissolved Solids (mg/L)	520			540			1700			1800			20	U				

Com - Comments refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable.

N/R - Not Required.

Q - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.

Sample No.	Quantitation
Sample I.D.	Limit
Lab Sample I.D.	N/A
Date of Collection	N/A
Analyte (units)	Result
Perchlorate (ug/L)	5
Total Dissolved Solids (mg/L)	20

Com - Comments refer to the corresponding section in the report narrative for each letter.

N/A - Not Applicable.

N/R - Not Required.

Q - Refer to data qualifiers.

U - The parameter was analyzed for, but was not detected; The associated value is the sample detection limit, adjusted for dilution, if any.

J - The associated value is an estimated quantity.